OPEN LETTERS.

A defense of the Botanischer Jahresbericht.

The criticisms uttered by Mr. J. Christian Bay in the December number of the BOTANICAL GAZETTE (18: 471–472. 1893) require an answer on the part of the editor of the *Botanischer Jahresbericht.* This answer must, above all, urge the incredible want of interest the greatest part of botanists take in the *Jahresbericht.* Indeed, the *Jahresbericht* mentions about 7,000 botanical writings every year, and what is the number of separates sent to the editor? 270–280 a year! The number of periodicals to be reviewed every year is certainly more than 1,000, and what is the number of periodicals the editor is presented with? About twenty! And Mr. Bay says: "A work of this kind ought not to rely *only upon donations!*" *Only!* It would be laughable were it not too painful. Mr. Bay will see from these data, that the editor, as well as his staff of collaborators, is relying a good deal upon "books and papers, which could be bought or otherwise promptly secured." The editor is not enabled to buy more than he does, for the botanical world neglects the *Jahresbericht* in still another manner: nobody buys it. There is a small number of public libraries, institutes and laboratories which acquire the *Jahresbericht* regularly, but private subscribers might be counted upon the fingers. Now, I ask Mr. Bay, whence should be secured the means for buying numerous periodicals not to be secured otherwise for the *Jahresbericht?* From the publishing bookseller? He is content with seeing his expenses barely reimbursed. From the editor? He lives with his family from his allowances as a teacher at a public school and does his work for the *Jahresbericht* for scientific, not for pecuniary interest, so that his work does not enable him to buy costly books and periodicals in a greater number. The same is to be said for the collaborators. They all stick to their work in the most disinterested manner, and sacrifice for the *Jahresbericht*, and consequently for botanical science, more time and labor than most botanists have any idea of. So I have to say to Mr. Bay: If botanists would buy the *Jahresbericht*, the editor might be enabled to secure more books or periodicals by buying, or by exchanging, though the *Jahresbericht* is much higher in price than most publications to be exchanged for it.

But, it must be added, periodicals are not what the *Jahresbericht* wants. It wants more separates. Many periodicals must be sent by the editor to half a dozen or to a dozen collaborators. So, a series of periodicals goes from Berlin to Luckenwalde; then, in due time, from Luckenwalde back to Berlin. After this, the editor has to prepare another set of books for Karlsruhe. Having got it back from Karlsruhe, he sends a third packet of new composition to Innsbruck, etc., etc. What enormous loss of time! It is impossible to allow the books to circulate among the collaborators, for the editor would need, in this case, to prescribe a peculiar course for every book, one book being destined for the collaborators A, B, C, D, E, the second for A, C, E, F, the third for B, D, F, G, etc., etc., and, moreover, the editor would lose all control. As to the collaborator reviewing periodicals in the libraries of his residence, he will spend a great deal of time in pay-

ing numerous visits (partly vain, partly successful) to the libraries. So his labor is immensely enlarged, the time he needs for finishing his report increases in a very troublesome manner. The *Jahresbericht* is published much later than the editor himself and the botanical world desire. This would all be changed if the botanists of all countries would think of sending their publications directly to the editor. These writings might then be distributed immediately among the collaborators, and these might work out the greatest part of their reports in their studies, with an invaluable gain of time, so that the *Jahresbericht* might be published more promptly. What a difference, for instance, for the bacteriological collaborator to have—as indeed he has—*one to three* separates every year from the authors themselves by the intervention of the editor, and to search for the rest of the bacteriological writings in several hundreds of periodicals,—or, as it ought to be, to have some hundreds of separates from the bacteriologists themselves! The *time* allowed every year for working off the extensive *Jahresbericht* is a factor Mr. Bay has entirely overlooked. The editor sets a greater value on the appearing of the *Jahresbericht* in due time than on its absolute completeness, and he is of opinion that a botanical author himself has a still greater interest in seeing his writings publicly known than his fellow botanists and the editor of the *Jahresbericht* have. Nevertheless, most botanists will do nothing at all for spreading abroad their articles, but depend entirely on the staff of the *Jahresbericht* or of other periodicals of similar character.—E. KŒHNE, *Friedenau bei Berlin, Kirchstr. 5.*

On compass plants and twisting of leaves.

If it be permitted, I would like to present a few remarks concerning the nature of the torsions in the leaves of the so-called compass plants. These torsions were described as twisting by Mr. Meehan (*supra*, pp. 158–159). The leaf-movements in the compass plants are, for good reasons, interpreted as heliotropical torsions. Now, Mr. Meehan states that these torsions result from "a somewhat prolonged effort of spiral growth."

Mr. Meehan has, evidently, confounded different movements. Having had some experience with compass plants, I shall be ab'e, I think, to explain Mr. Meehan's results. The question is very simple, and belongs to the elements of vegetable physiology.

I. Compass plants. Experiments (the literature was given in my article on this subject in the Deutsche Botanische Monatsschrift 11: 1. 1893) have demonstrated that (1.) The vertical position of the leaves is assumed only when the plant is growing fully exposed to the sunlight. (2.) When the plant is growing in the shade, the leaves assume the fixed light-position. (3.) When the plants are so situated that they receive only the oblique rays of either the morning or the evening sun, the leaves place their superior surfaces at right angles to the incident rays. (4.) When the plants are under such circumstances that they receive the sun's rays only when the sun is high in the heavens, the leaves present their superior surfaces to the incident rays.

These results certainly indicate that the torsions are physiological. I think that Mr. Meehan's observations are very easily and simply explained from what we know of the relations of heliotropism to growth, which has been established mainly by De Vries, Müller–Thurgau, Ch.